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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,482	05/15/2001	Yasushi Imamura	2001-0244A	1350

513 7590 06/10/2004

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SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/786,482	IMAMURA ET AL.	
	Examiner	Art Unit	
	Lewis A. Bullock, Jr.	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/6/01</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Figures 7-9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated as detailed in the specification on pages 1-7. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (APA) in view of CARMON (U.S. Patent 5,640,563).

As to claim 1, APA teaches a digital signal processor, comprising a main arithmetic device that generates a task demand and an auxiliary arithmetic device that receives the task demand from the main arithmetic device and performs the task (pgs 1-

7). However, APA does not teach the auxiliary device providing a reservation processing register and a clear circuit.

CARMON teaches a digital signal processor, comprising: a main device (host processor) which generates a task demand, an auxiliary device (DSP processor / DSP operating system) which receives the task (task / frame manager) demand from the main device (host processor) and performs the task; the auxiliary device (DSP processor / DSP operating system) being provided with a reservation processing register (idle list / frame manager prioritized execution schedule) for setting a task from the main device even when the auxiliary device is performing a processing (currently executing task); a clear circuit for clearing the task (task / currently executing task) stored in the reservation processing register (idle list / frame manager prioritized execution schedule) after the task set in the reservation processing register is performed (task context is saved and unloaded for executing the higher priority task); and the task demanded from the main device being performed after the auxiliary device terminated the task which has just been under execution (task interrupted and higher priority task executed) (col. 12, line 45 - col. 13, line 40; col. 13, lines 56-65; col. 4, line 54 – col. 5, line 20; col. 5, lines 46-58; col. 6, lines 2-47). It would be obvious based on the combination that the processors are arithmetic devices used to communicate perform task request and task execution. Therefore, it would be obvious to combine the teachings of APA with the teachings of CARMON in order to facilitate an improved task scheduling system that reduces the task scheduling processor cycle overhead demand in a DSP environment (col. 3, lines 8-18).

As to claim 2, CARMON teaches the auxiliary device (DSP processor) has a priority judgment circuit for determining the priority (priority) for performing the processing of the task, for which the processing is demanded (task / frame manager on idle list), to execute the processing, and the auxiliary device performs the task in accordance with the priorities of respective tasks determined by the priority judgment circuit (wherein the a check is made of the priority indicator to determine whether the given frame manager being removed from the idle list has greater or less priority than the currently executing task and performs accordingly) (col. 13, lines 56-65).

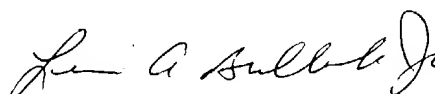
As to claim 3, CARMON teaches the auxiliary device (DSP processor) has an interruption signal generation circuit for generating an interruption signal interrupting the processing which is under execution (interrupts and saves the status of the currently executing task), and when receiving the task demand from the main device, the auxiliary device interrupts the processing and performs the task demanded from the main device (wherein the a check is made of the priority indicator to determine whether the given frame manager being removed from the idle list has greater or less priority than the currently executing task and if the task is a higher priority task the currently executing task is interrupted and its status saved so that the higher priority task is executed) (col. 13, lines 56-65; col. 5, lines 26-40; col. 3, lines 26-37)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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